INFORMATION OPERATIONS - A NEW TOOL FOR PEACEKEEPING

A MONOGRAPH
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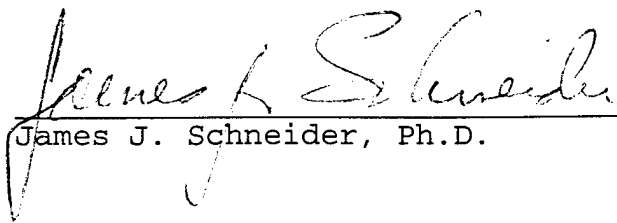| 17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
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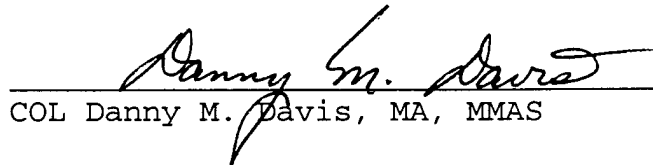
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ABSTRACT

INFORMATION OPERATIONS - A NEW TOOL FOR PEACEKEEPING by Colonel Gary E. Phillips, USA, 74 pages.

This monograph discusses the application of information operations to improve the efficiency and effectiveness of peace missions ranging from peacekeeping to peace imposition. Using a variety of models and an examination of the components of information operations this monograph demonstrates the applicability of these operations to peace missions. Examples from recent history provide a backdrop for evaluating previous applications and investigating other potential uses of information operations to support peace missions. Based on the validation of applicability the possible increase in effectiveness and efficiency are postulated and potential resource savings evaluated.

The monograph first examines the status of international relations as a result of the demise of the Soviet Union and the rise of information technology. The impact of these two earthshaking events have forever changed the face the world. As the nations of the world seek a new geometry of relationships without the Soviet Union the level of violence continues to rise. Without the unifying ideologies of the Cold War, many nations are seeking identity through ethnicity. This factor in conjunction with a freedom to act completely in promotion of national interests without the specter of a global nuclear war has led to a very unstable world. At the same time that United Nations pleads for resources to enforce peace on the new world disorder, nations are increasingly captured by domestic issues. The question becomes can we afford the expanding resources necessary to keep the peace and still answer domestic problems?

The final sections of this monograph address the utility of information operations for peace missions. Information operations, the application of the continued advances in information technology, provides a tool to make peace affordable. Information operations allow cost effective solutions to violence by reducing the resources required to keep the peace. Peace missions can use information operations to reduce forces necessary to make peace, bypass belligerent leaders to inform populations about alternatives to violent solutions, and control the ability of belligerents to continue conflict. The maturation of the information age provides an opportunity to establish a "Pax Informationus" and retain sufficient national resources to address domestic problems.

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INTRODUCTION

The Russian Bear has fallen and the microprocessor rules the world. The demise

of the former has resulted in tremendous turmoil as the nation-states of the world attempt

to settle into a new geometry of relationships.

> *"The collapse of Soviet communism has left us with a paradox; there is less threat but also less peace."*[1]
>
> General Manfred Woerner
> NATO Secretary General

The rise of the microprocessor has contributed to this turmoil by sparking an equally

tumultuous revolution in the information domain.

> *"What we have is technology, organization, and administration out of control, running for their own sake... And we have turned over to this system the control and direction of everything."*[2]
>
> Charles Reich
> The Greening of America

The Cold War is over and the chasm between the ideologies of the Union of Soviet

Socialist Republics (USSR) and the US (US) is closing as the USSR experiments with a

market economy. However as General Woerner points out there is less peace in the world.

The dissolution of the Soviet empire has been attended by the conflict and violence

expected when an empire collapses. The former Yugoslavia, Chechnaya, Estonia and

others are the internal after shocks resulting from the collapse of the Soviet empire.

Externally, countries of the world are exploiting a release from a world frozen by the

possibility of a superpower showdown. The end of the Cold War has produced a world

that debates the need for continued mutual security agreements, no longer fears

superpower ambitions and shows an alarming tendency toward the disintegration of

former nation states. The transition from a bipolar world to a multipolar world is

demonstrating a dramatic penchant for violence as nations and other geopolitical entities pursue objectives denied them during the Cold War. We are entering a time of shifting alliances, rivalry, competition and the intense pursuit of ethnic identity.

The quest to expand the North Atlantic Treaty Organization, the new impetus for a European Union, North America Free Trade Agreement, humanitarian disasters in Rwanda, Burundi, Somalia and Haiti, and Turkey's rapprochement with Iran over US objections are some of the symptoms of the "new world disorder" and the lack of agreement over where the future should lead the international community. Kaplan in his book, The Ends of the Earth, predicts the collapse of the nation state and the current evidence indicates he has a reasonable chance of being correct.[3]

Overlaid on the collapse of the Soviet Union is the continuing information revolution. Information technology did not arrive at its current state overnight, it just seems that way. The rapid rise in the power of the integrated circuit in conjunction with reduced costs has revolutionized the worldwide communications system, banking and finance industry and worldwide production and product shipping operations. It also has brought the attendant consequences of weakening traditional hierarchies and transferring the power of information to the masses. This transfer of information to the masses has also increased the vulnerability of nations to manipulation by the media and others with access to communications networks. Many of the conflicts of today are inspired by providing the population of a nation a biased version of reality that emphasizes violent means to remedy an apparently discriminatory situation.

In this chaos of nations and ethnic groups seeking to achieve goals by force of arms, lies and deceit the United Nations has the international charter to keep the peace.

Peacekeeping is conducted under Chapter VI and Chapter VII of the United Nations charter.

As indicated by unstable condition of the world, peace missions have grown exponentially in terms of number and cost. United Nations peace operators have grown from 8,000 in 1988 to 62,500 in 1995. The cost of peace operations rose from $200 million in 1988 to $ 3 billion in 1995.[4] This rapid increase occurs at the same time that the developed nations of the world are dramatically reducing their armed forces and are increasingly focused on spending national budgets to resolve domestic issues.

This monograph will not discuss the issue of relationships of the media to peace operations or the potential involvement of Non-Governmental Organizations/Private Volunteer Organizations (NGOs/PVOs) in peacekeeping information operations. While clearly these entities are deeply involved in peace missions and are a part of information operations, those subjects are so complex that they deserve separate treatment. Neither will this paper address the legality of information operations in the context of peace missions. The sovereignty of information has not been established in international courts. We will proceed on the assumption that information operations are mandated by the United Nations or included in peace accords agreed to by the concerned parties.

The world of the late 20th century realizes a conjunction of two momentous events, or to borrow from Thurow, The Future of Capitalism, the meeting of "tectonic plates"[5]- the restructuring of the community of nations less the Soviet Union and an unprecedented ability to access, use and manipulate information. Juxtaposed is the increasing cost of keeping the peace in a world with populations demanding resources to solve perceived domestic problems. The solution appears to be to harness the power of the information

revolution to tame the turbulence of a world seeking a new equilibrium. Images and ideas have been used for ages to inspire populations to go to war. The diffusion of political power to the masses as a result of access to information not controlled by national or ethnic leadership allows peacekeepers to appeal directly to the population with views of alternative futures that do not include conflict. Over the next pages we will explore the idea of applying strategic and operational information operations to reduce the cost of peace missions by examining models, a methodology and potential techniques.

SECTION I. The New World Order: Less Threat but Less Peace

"The causes of war lie in economic inequity, in the contradictions between the interests of individual factions, on all the conditions of the historical process..."[1]

A.A. Svechin

The world today has dramatically changed from the bipolar world of the Cold War. The collapse of the Soviet Union signaled the beginning of a window of opportunity for many nations to pursue national objectives denied to them by the Cold War. The forces that restrained open conflict in the world have been removed. For forty years, the nations of the world adjusted their national policies to accommodate the competition between the United States of America (US) and the Union of Soviet Socialist Republics (USSR). The demise of the Soviet Union and the American national debt incurred in the conduct of the Cold War has dramatically changed relations among nations for the next century.[2] Combined with the end of the Cold War, the information revolution begun with the introduction of the printing press has reached a new peak. The people of the world have unprecedented access to information about other nations and populations. This access

brings the opportunity for development of "hostile feelings" based on perceptions of unfair distribution of the world's resources.

Huntington in his book, The Clash of Civilizations and the Remaking of the World Order, describes the post Cold War world as unstable place with nations and populations seeking an identity not framed in a Cold War relationships. No longer able to identify by a unifying ideology, the people of the world have rediscovered ethnic identity and culture as defining attributes. The resurgence of ethnic identification has put values in conflict and also added to world violence.[3]

The Cold War

The Cold War provided a stable, predictable, if sometimes dangerous, framework for international relations. Regional conflicts for the most part were subsumed in the larger superpower competition. International arguments were suppressed by world concern over superpower competition and ambitions. The end of the Cold War has returned the world to a time of international relations characterized by shifting alliances, rivalries, and the potential for increased use of arms to settle internal and external conflicts of interests. The only remaining deterrent to the pursuit of national interests through force of arms is the patchwork of shaky coalitions that the United Nations or other interested parties can piece together as a response to diplomacy by combat.

Effects from the End of the Cold War

The end of the Cold War and the collapse of the Soviet Union significantly weakened collective security arrangements, mitigated the international fear of superpower ambitions, and disrupted Cold War economic patterns. The end of the Cold War and the resulting lack of a credible international deterrent to violent solutions of international and

civil disputes has contributed to the escalation of violence. Over the course of human history values have proven more persistent than the pursuit of national wealth in creating national conflict. High levels of economic interdependence have never prevented civil wars over conflicting value systems.[4] As Carl Von Clausewitz points out "modern wars are seldom fought without hatred between nations" and all conflict is a result of hostile feelings that are translated into hostile intentions.[5] The end of the Cold War ends the fear of superpower involvement and allows the freedom for nations and other geopolitical entities to now translate their hostile feelings into hostile intentions - armed diplomacy.

Cold War Collective Security

During the Cold War countries were bound into mutual security arrangements based the spheres of influence of the US and USSR. The Cold War allowed the US to significantly influence the foreign policy of Japan and its European allies.[6] The same was true for countries allied with the Soviet Union. This allowed the allied countries to pursue economic power while under the umbrella of superpower defense -- at some cost in national self determination. The end of the Cold War and a new multipolar world makes many security arrangements to a degree irrelevant and permits nations to pursue their own destiny in foreign policy with little fear of adverse consequences. The recent example of Turkey pursuing trade agreements with Iran illustrates the new tone in international relations. For years the Turkish government feared the Soviet forces on their border and were willing to allow strong US influence over Turkish foreign policy. The collapse of the Soviet Union frees Turkey to pursue national interests in spite of US objections. In early 1996, President Clinton chose to impose unilateral economic sanctions on Iran as a result of a US national "dual containment" policy of Iraq and Iran in the Middle East.[7] The issue

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at hand was to prevent or diminish the ability of Iraq and Iran to develop substantial military forces, support terrorism or build nuclear weapons. The day after the US announcement, the Turkish government signed a $20 billion natural gas contract with Iran. Senior Turkish government officials pointed out that in the past Turkish support of US sanctions against Iraq cost Turkey over $20 billion dollars in lost revenues. The Turkish daily newspaper, Huriyet, stated, " Turkey has...vital national interests with Iran...".[8] At the same time, the US has committed significant resources to protecting the Kurdish population in Iraq, the Turks have entered other agreements with Iran to quash the Kurdish Workers Party (PKK) and end the nascent Kurdish nationalist movement. Apparently the easing of Soviet military pressure on the Turkish border has permitted more freedom in pursuing national interests in the face of objections by the US. Former Turkish Prime Minister Ciller captured the spirit of the new world order with her statement in April 1996 while visiting Washington, D.C., "Turkey will not hesitate to take such action to protect its security, whatever the world may think about it."[9]

Cold War Fears

Some very diverse nations were held together by the fear of superpower ambitions, for example the former Yugoslavia. As described by Dr. Jacob Kipp, senior military analyst at the Foreign Military Studies Office (FMSO), Fort Leavenworth, the only glue that bound Yugoslavia into a nation was the fear of Soviet ambition.[10] Recent history implies a causal connection between the end of the Cold War and the disintegration Yugoslavia into a group of warring factions. The ethnic hatred in Yugoslavia had lain dormant for decades as the different groups struggled to avoid a Czechoslovakia-like Soviet intervention. The common enemy bound the country together. The conditions for

the revival of ethnic conflict were set by the disappearance of the Soviet threat. Although there are a myriad of factors that contributed to the violence in the former Yugoslavia, it is undeniable that the collapse of the Soviet Union provided the catalyst.[11]

Chechnaya and Georgia in the former Soviet Union provide further examples of ethnic groups exploiting the collapse of the Soviet empire to establish ethnic homelands. The fighting in Chechnaya began in December 1994 and the recently signed peace agreement still has not brought peace to the area. The fighting was a result of opposition to Russian attempts to hold parliamentary elections in Chechnaya and decades of intense ethnic discrimination against the Chechnayan population. The Abkhazian rebels in Georgia also want an ethnic homeland and the right to pursue national self-determination. Since the fighting began in 1993, thousands have died but the Georgian government continues to resist the notion of allowing a separate state for the Abkhazian population.[12] These examples are indicative of the diverse ethnic and political entities held together by the fear of Soviet power. The demise of the Soviet Union has ended this fear and contributed to the continuing disintegration of the region. The collapse of the Soviet Union also caused a serious economic impact in the post Cold War world.

Cold War Economics

The Cold War provided a stable economic market with the added value of security provided by the superpowers. The stable market continued and accelerated worldwide economic interdependence, at least within the relative spheres of influence. Economic interdependence normally implies reduced conflict because countries need each other. This is true as long as the nations do not fear each other. Lacking security, real or perceived, economic interdependence can spur conflict by raising the specter of economic

warfare.[13] The 1991 Gulf War was as much a result of the world dependence on Southwest Asia oil reserves as it was stopping Iraqi aggression. The international community simply could not countenance Saddam Hussein with a stranglehold on world oil reserves.[14] The end of the Cold War has jeopardized four decades of security arrangements while the commerce of the world depends on the continuing increase of economic interdependence.

The growing world economy has resulted in another paradox. There are an increasing number of separatist movements that believe that the combination of communications technology and the global economy will allow them to declare nationhood without risking economic suicide. Some recent examples include Tamil separatists in Sri Lanka exchanging plans over the Internet for establishing a Tamil nation centered on the Trincomalee harbor as a free trade zone, and French-Canadians plotting the demise of Canadian union with the secession of Quebec. Belgium has already disintegrated into three provinces, Wallonia, Flanders, and Brussels each with a different national language. Separatism can lead to violence when the separation from the central government is not amicable. Nations, like human beings, have a survival instinct. The government of a nation must define the difference between mutual dissolution and rebellion.[15]. As described by Thurow in the Future of Capitalism, those in charge wish to remain in charge and thus are resistant to change. To the extent that the disintegration of a nation reduces power and control of the ruling elite the disintegration will be challenged.[16] The US faced this issue in the 1860's and one of the bloodiest wars in history ensued. Should we expect less from other peoples of the world ?

Distribution of the World's Resources and Nationalism

Captain A. T. Mahan said in his book on seapower that the cause of war is nations' attempts to seize a disproportionate share of the world's wealth for the benefit of their populace.[17] The information revolution has prompted the realization by underdeveloped nations that they have not been allowed a proportionate share of the world's wealth. This will produce continuing international conflict. South America and Africa are two regions of the world that have for ages been exploited for raw materials and cheap labor. As information of the great gap in the standard of living becomes apparent, expect populations to demand that their political leadership remedy the issue. When the remedy is not forthcoming, revolution is. The former leaders are replaced by those that say they have the answer, until they fail. Stopping the cycle of violence requires the intervention of the developed world and an effort put into building a national infrastructure that addresses the needs of the people with real solutions. Nicaragua, El Salvador and Guatemala provide historic examples of gross maldistribution of resources within a country.

Values in Conflict

The information explosion causes nations to be in ever more intimate contact with each other. Differences in value systems are now glaringly apparent and populations have begun activity to reconcile these differences, sometimes with violence.[18] With communism discredited and capitalism dominate, the unifying forces in many areas have become culture, ethnicity or race.

Identification by racial or ethnic characteristics is by nature exclusionary. This limits unifying values to those with common ethnic or racial origins. Because common values are a building block for nations, the move from inclusive unifying ideological

values to exclusive ethnic values has led to disintegration of nations. Much of the civil conflict in the world has been inspired by cultural values in conflict and the disintegration of nations lacking unifying values. Regional boundaries established treaty agreements as a result of conflict were largely based on the views of the victors as opposed to the homogeneity of the population. A.A. Svechin, a Soviet military theorist, points out that "Every state border is a result of war. The outlines of states on the map make us familiar with the strategic and political thinking of the victors."[19]

Nations are based on many elements, language, geography, ethnicity, physical characteristics and others, but the binding force is a shared set of national values. With the current patchwork of national borders crossing ethnic and more importantly national value lines, violence is inevitable as populations attempt to resolve their differences on the most fundamental views of what is right. Civil wars are normally the result of a violent disagreement over national values. The American Civil War provides a plethora of disputed values between the South and North. The idea that it was simply an economic war to keep the agrarian South providing raw materials to the North simply does not explain the intensity of the conflict. The current situations in Rwanda, Burundi and Zaire are illustrative of values in conflict. Although these populations are ethnically similar, the cultural backgrounds are dramatically different -- herdsman nomads versus agrarian villagers.[20] This distinction was exploited by the ruling elite in a systematic propaganda campaign. The intent was to avoid sharing power with minority Tutsi tribe, historically agrarian villagers. In the countries of Burundi and Rwanda, their national radio stations were instruments of propaganda associated with genocide. During the initial stages of the 1996 conflict the national radio stations broadcast ethnic hate messages and the names of

the people to be killed. Media propaganda referring to the Tutsi people as "cockroaches" dehumanized them and encouraged violence against people who had been neighbors. The historical differences in cultural values that had not been an immediate source of conflict became the focus of attention as a result of use of national radio and newspapers. Jane Stanley, a BBC correspondent in the region for 14 months, commented that the " ...people still hate the radio."[21]

Results of the End of the Cold War

The foregoing illustrates the coincidence of the loosening of international security ties as a result of the end of the Cold War and the concurrent information technology surge as providing the conditions for a world with more violence than before. Information technology changes the environment by weakening traditional hierarchies that controlled information available to populations. The proliferation of the computer, the expansion of commercial satellite communications and acknowledgment of information as a potent tool to achieve desired goals changes the milieu of conflict. The current conditions provide a window of opportunity for many nations to follow Mahan's prescription and "...secure for one's own people a disproportionate share (of the world's resources)..."[22]

Dr. R. Swain, noted military historian at Fort Leavenworth, believes that the current high levels of conflict are a passing phase and in the next decade nations will develop a new balance of power dramatically reducing conflict.[23] However, if history is truly a guidepost for the future, the next decade more closely resembles the international arena in the early 19th century where the constantly shifting alliances and rivalries caused a constant low level military bickering and eventually two world wars.

The major difference between that period and the present is the dramatically increased economic interdependence of the world's developed nations. In the early 19th century countries remained largely economically independent.[24] This is not to deny that there was trade in the early 19th century. The implication is that nations were not in competition for resources necessary for survival or maintenance of an acceptable standard of living. Perhaps the best example of the binding economic independence is the fossil fuel (oil) industry. The developed and developing world rely on the Middle Eastern countries that hold the bulk of the world's oil reserves. This economic dependence extends to the point of going to war to maintain the flow of oil a policy formulated in the US originally by President Carter in 1979 and later as the Bush Doctrine in 1991.[25] The end result is a tight coupling of the international economy. This coupling demands cooperation but inspires conflict whenever national interests do not coincide.

The collapse of the Soviet Union and the resulting disorder has opened a window of opportunity for many nations to pursue national objectives denied them during the Cold War. Some national interests are the result of the nation's population demanding a fair share of the world's resources, other objectives are founded in man's nature to pursue power over other men, many population's goals are the perceived chance to found a new nation over the objections of the central government. The pursuit of these national interests to the detriment, real or perceived, of other nations that will cause a future characterized by nearly constant international conflict. So we are led back to Woerner's thoughts, "The collapse of Soviet communism has left us with a paradox; there is less threat but also less peace."[26]

Section II. Keeping the Peace

"No people, however gentle, civilized, and well disposed has ever succeeded in living harmoniously together without the help of a police force and ultimately of an army to see that the norms of its law are generally fulfilled."

Eugene V. Rostow
Toward Managed Peace,1993

During the Cold War quarrels between smaller states were ignored as a method of retaining the balance of power between the US and the Soviet Union. The international community lived in the constant fear that violence between undeveloped nations could escalate into a superpower nuclear exchange. With this threat no longer apparent, some nations feel that ignoring these quarrels today is an abdication of moral responsibility. In a larger sense the growing global economy makes it impossible to ignore interstate violence. A civil war or war between states has global impact on the economy and potentially on the security or standard of living of many nations.

In the turmoil of the new world "disorder", the United Nations has the international charter to keep the peace. Peace missions are divided into two categories depending on the level of violence and the level of agreement by belligerents to allow United Nations forces to intervene. Under the United Nations charter, Chapter VI operations are peace missions conducted under a peace accord and consist of monitoring and reporting. Chapter VII missions are peace operations that call for restoring of order and enforcement of peace on sometimes unwilling belligerents. In today's world many peace missions fall in between Chapter VI and Chapter VII making an appropriate response difficult. This changing environment has driven the cost of keeping the peace dramatically upward. results.

Definitions

Peacekeeping under the UN proviso is normally viewed as putting a lightly armed force between two former belligerents as a buffer. However, over the past years the vocabulary of peacekeeping has expanded to capture some of the nuances of dealing with populations in conflict. The larger view begins with the notion of peace operations of which peacekeeping is a component.

Peace operations encompass four types if activities: preventive diplomacy, peacekeeping, peace enforcement and peacemaking. Each of these are defined relative to the level of agreement to the introduction of outside forces. Preventive diplomacy encompasses actions taken to mediate disputes before violence occurs. It may include offers of observer forces to monitor activities of potential adversaries or positioning of military forces in a manner to discourage conflict as well as traditional diplomacy. Peacekeeping is based on the fact that the former belligerents really want to cease hostilities and just need some time and space to work things out. Peacekeeping primarily involves monitoring the implementation of the peace accords and observing the activities of the former belligerents. Peace enforcement involves compelling the former belligerents, by military force if necessary, to abide by peace accords, United Nations directives or international law. The acceptance of an outside force is lower than in peacekeeping. Finally, peacemaking entails the forcible separation of belligerents and the use of military and diplomatic means to make peace whether or not the combatants are willing to stop. As one might guess the acceptance of outside force in this situation is low.[1]

In the complex world operations conducted in the name of peace may involve some or all of the concepts described. In Somalia the intent was simply to provide security to the organizations distributing food to the Somali hinterlands. In the process, it was necessary to conduct peace enforcement activities as a matter of protection. The enforcement of agreements reached with local warlords may not qualify as a peace accord under United Nations regulations, but the outcome was the same. The forces in Somalia used military force to compel compliance based on agreements with Somali clan leaders. The confiscation of weapons and disarming of "technicals" was a peace enforcement mission conducted in conjunction with humanitarian relief.

United Nations Role

In the chaos of the world described above, the United Nations has the charter to help bring order to the problem by performing peacekeeping operations. During the Cold War quarrels between smaller states were often ignored as a method of maintaining the balance of power. There is no compelling reason to ignore these quarrels today, some nations feel that is an abdication of moral responsibility to allow the "killing" to continue. On a more practical note the continuing spread of weapons of mass destruction make the possibility of a quarrel turning into a world conflagration more so now because of the lack of control that was present during the US-USSR stalemate.[2] So for two very human reasons, we want the United Nations to engage in peacekeeping operations, it seems to be the right thing to do in terms of saving human life, and we want to make sure that *inter*national or *intra*national conflict does not expand and affect our lives.

Article 39 of the United Nations charter provides the basis for peace operations, "...shall determine the existence of any threat to the peace, or act of aggression and shall

make recommendations or decide what measures shall be taken...to maintain or restore international peace." Article 41 encourages the nations to take non-violent actions to bring the parties into compliance. This ranges for a slap on the wrist through the international media to economic sanctions. Article 42 establishes the foundation for military actions deemed necessary by the Security Council and Article 43 asks member states to contribute military forces.[3]

The United Nations is not the only forum through which nations engage in peace operations. In many cases peace operations are conducted as a result of multilateral security agreements or unilaterally in response to perceived threats to a nations vital interest. In recent times initial United States activities in Haiti and Somalia fall under the umbrella of unilateral operations in response to demands by the body politic. It seems the national interest threatened was a western cultural inclination about the sanctity of life. For Somalia, the media framed the threat with the slogan, "Stop the dying.."[4] The former Yugoslavia is an example of a multilateral peace operation under the aegis of a collective security agreement (North Atlantic Treaty Organization- NATO). This issue of whether the operation is legal under the provisions of the NATO charter is a moot point; it still provides an example of a multilateral peace operation under the umbrella of a collective security agreement. In all of the above cited cases, the plan calls for the operation to be turned over to the United Nations at some point. The initial unilateral or multilateral involvement appears to be based on a need to rapidly quell the conflict. The United Nations involvement is intended to provide long term stability as the warring parties reach understanding and implement peace accords.

Changing Environment

UN peace missions can be initiated under Chapter VI, peaceful settlements to disputes or Chapter VII, enforcing peace. There are however many international situations that fall in neither category. Dag Hammerskjold noted this and coined the phrase "Chapter VI and-a-half", to describe situations that are neither peaceful settlements nor peace enforcement.[5] GEN(R) Barry McCaffrey has coined a new term, "aggravated peacekeeping", to capture the idea of belligerents who somewhat unwillingly have been coerced into making peace. The difference between inserting troops to monitor an in place peace agreement and inserting combatants to enforce national will are substantially different operations.[6]

As described earlier classic peace operations assume that all parties to the conflict desire the presence of peace operators. Military missions are minimal, consisting primarily of observation and reporting of violations to peace accords. As the level of violence goes up and the willingness of belligerents to negotiate goes down, the use of military force by peace operators escalates. Use of military force to protect international peace and stop aggression resulted in the Korean War and the 1991 Gulf War. Both conflicts ended up as UN Chapter VII operations to enforce peace terms on unwilling aggressors.

Just short of international war, e.g. Korea and Desert Storm, is peace imposition. The international community becomes involved because the alternatives to allowing the conflict to continue are undesirable. Starvation and publicity lead to a UN Chapter VII peace imposition operation in Somalia. Peace imposition stops parties in active conflict from continuing the fight.

Less dangerous are peace enforcement operations. Peace enforcement uses military force to hold belligerents to an peace agreement that not all belligerents completely accept. The purpose is to provide time and space to reduce hostile feelings and create a positive atmosphere for later negotiations.

Peace imposition and peace enforcement require sufficient military force to observe and enforce peace agreements. The lack of sufficient force resulted in the failure of UNOSOM I in Somalia and the UNPROFOR in Bosnia. Neither UN group had sufficient capability to observe and enforce peace agreements. The result was continued violence and eventual withdrawal of UN forces. Withdrawal of UN forces sends the wrong signals to belligerents, it removes direct international sanctions and invites further violence. The results in Bosnia and Somalia support that argument strongly.

The goal of all peace missions is to create and maintain stable conditions where peace can flourish. Long term peace enforcement or peace imposition missions are by definition a failure. The measure of success in peace operations is crossing the "great divide" from Chapter VII to Chapter VI peace missions as shown below.

UN Mandate	Level of risk to peacekeeper	Nature of operations	UN Response to violation	Public Responsibility for failure
UN Chapter VI	Generally low Between Armed Forces	Observer	Disengage, withdraw	Belligerent
UN Chapter VI	Moderate, more arms involved	Peacekeeping	Disengage, withdraw	Belligerent
GREAT DIVIDE				
UN Chapter VII	High, one of the belligerents begins fighting	Peace Enforcement	Military	Peace Operator
UN Chapter VII	High, all belligerents return to fighting	Peace Imposition	Military	Peace Operator

Figure 1 The Nature of Peacekeeping [8]

In today's unsettled world more and more peace missions fall into the area near the great divide, Hammerskjold's, Chapter VI and-a-half missions. These are the biggest challenge, requiring a delicate balance of military force, diplomacy and trust to prevent escalating violence and potential international war.

Intuitively we all agree that peace is a good thing, it gives our world stability and security. It appears that we are willing to invest significant amounts of our resources to maintain peace in a violent and changing world for economic and humanistic, (dare I say altruistic) reasons. Considering the meteoric rise of operations couched under peace operations (including humanitarian relief as a result of conflict) and their cost (described in Appendix A, "The Value and Costs of Peace") the question remains, at what point can we no longer afford or wish to pay for keeping the peace if it does not directly effect national interests ? How long before the populations of the world have to choose between their standard of living or stopping African tribes from committing genocide ? The United Nations and the United States deployed troops to Rwanda in 1996, will we do it in 2006 ? United States Presidential Decision Directive 25 is the first shot in a long war to reduce the costs of peacekeeping by making it more efficient. It sets limits on what the United States will pay and under what conditions resources will be committed.

All of the gnashing of teeth over the cost of peace in a world with downsizing militaries neglects to consider the possibilities offered by information technology. It is clear that the information revolution in military affairs has application in peace operations as an augmentation, a supplement and in some cases a replacement for military forces in the conduct of peace operations. Nations and populations have been inspired to violence by the effective use of information technology to modify their perception of reality. Adolf

Hitler and the Third Reich relied heavily on information operations to move a nation to war. The Hutu leaders in Rwanda followed the same propaganda prescription to turn neighbor against neighbor in the name of culture and power. If information operations have the potential to inspire conflict, logic dictates that some applications must have the potential to end or reduce violence. It is this notion that will increase the efficiency of peace missions and reduce the cost in terms of dollars and lives.

There are three potential methods for information operations to increase peace missions efficiency. First, preventing conflict by providing the population an alternative view of secure futures without violence. Second, by preventing or limiting the effectiveness of information campaigns that facilitate conflict between nations or other entities. Third, by providing peace operators with greater situational awareness and thus reducing the number of forces needed to effectively enforce peace accords. In many cases the precise efficiencies gained through the integration of information operations into peace missions will not be able to be measured in dollars. Measuring the efficiencies of information operations may be like measuring the cost of deterrence. It is hard to measure the cost of deterrence simply because the alternative -war- did not occur.

Today, the international community wants to keep the peace for moral and economic reasons. The United Nations provides a mechanism. However, the geometric increase in number and costs of peace missions may soon reach the breakpoint unless the world harnesses technology to improve efficiency and effectiveness. The competing financial demands of internal domestic programs mean that the international community can not afford more failed peace operations like Somalia. The following sections will explore the concept of information operations and their potential utility for peacekeeping.

SECTION III. The Information Revolution and Information Warfare

rev-o-lu'-tion- (2) a sudden, radical or complete change.[1]

Information

Before attempting to establish or refute the fact of an information revolution it is important to establish the playing field, so to speak. Defining information runs the risk of being so broad as to be useless, or so narrow as to constrict understanding. Information has been defined in various forums in the following ways;

"...symbols that provide visualization or convey a thought"[2]

"... the content or meaning of a message."[3]

"...(1) the communication or reception of knowledge or intelligence (2) knowledge obtained from investigation, study, or instruction."[4]

From the above definitions we see that information can be viewed as symbols, content and communication. A reasonable synthesis reveals a working definition of information -- symbols conveying the relationship of facts. A taxonomy of information under this definition would be as follows. Facts or data are the basic level. A fact is an observed truth about the environment. For example, the wall is brown. When facts are collected and relationships among and between the facts are postulated, information is the product. Information is certainly subject to the interpretative nature of human beings. Facts can be interpreted in a wide variety of ways by different people and different cultures. Regardless of the interpretation, information is the resultant product.

When information is compiled and universal truths begin to emerge, the resultant product is knowledge. Knowledge implies a relief from the mental models overlaid on the information as an interpretation of facts. The compilation of information from many

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sources begins to negate the impact of interpretation as the mental "lenses" are overlaid.

So in this taxonomy one goes from observed truth (facts/data) to an interpretation of these

truths (information) to a compilation of interpretations that can create a better

understanding of potentially universal truths (knowledge). Information under this

taxonomy has a narrow definition as processed data or facts. In common use it can have a

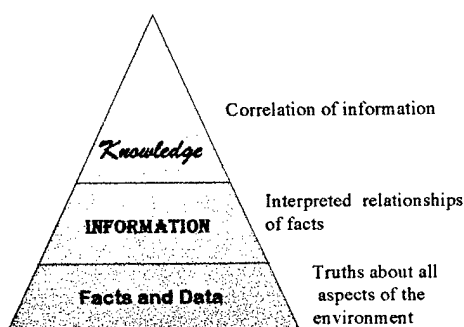holistic meaning spanning the realm from ordinary observations to the meaning of the

universe.[5]

Figure 2. A Taxonomy of Information

Information has always been available. What has changed in the 20th Century that

causes us to determine that there has been an information revolution ? First, consider the

speed of transmission of facts and information. The speed of transmission is not tied to

the speed of electricity, but the speed of processing facts to produce information by

determining patterns and relevance. Telegraph messages moved at nearly the speed of

light, just like satellite communications systems today. The issue becomes the amount of

information moved and the ability to process it at the receiving end. The telegraph

operator processed messages serially, one message at a time, and at whatever speed he

could maintain in understanding and copying the coded messages. The computer of today

processes messages in parallel at the speed of light. In just six generations microprocessor

performance has increased over 750 times, a rate of growth unparalleled in other field.[6]

These increases both accommodate an increased density of information and at the same

time contribute to the density. Being able to process more of the data available encourages

more data collection and produces additional information for processing and refinement.

The second factor is the ability to transmit images. Images have great impact on

human beings. We are genetically programmed to be visually oriented. The maxim that a

picture is worth a thousand words is an accurate reflection of how human beings process

information.[7] Reading that a soldier was killed is far different from seeing it as it happens!

The final factor is the availability to the masses of systems to receive information. Radios,

televisions and computers are available to the vast majority of the world population. The

information revolution is a result of information speed (transmission and processing),

images and availability. The dampening of any of these factors begins to wet the fuse of

the revolution's fireworks. Try to imagine the low impact of images that take days to

transmit and receive or the simple expansion of radio channels without any prospect of

images.

In the past radio messages have stirred the masses to action. Beniger notes in his

book, The Control Revolution- Technological and Economic Origins or the Information

Society, that the US government recognized the power of radio to influence the public and

began efforts to control broadcasting.[8] While radio provides one tool for controlling

information, the images provided by television provide a more powerful tool. The

problem is that radio leaves much to the imagination of the listener. Every imagination is

different and the message perceived by the listener will be a result of the lenses of each particular mind. Unless the radio message finds a resonance in common beliefs the images will be disparate. Television leaves less to the imagination, the pictures on the screen in some cases provide the a foundation for beliefs later reinforced with words.[9]

The question still remains, have we had a sudden or complete change in the world of information - a revolution ? The answer is clear when one compares the current state of the information world to the world ten years before -- 1986 to 1996. The growth of capacity for handling facts and understanding relationships to produce information has increased geometrically versus arithmetically. The capability of microprocessors has grown from containing 1.2 million transistors in 1989 (INTEL 486 chip) to 5.6 million transistors in 1995 (INTEL P5 chip).[10] There have been six generations of microprocessors since 1971, the growth rate in handling millions of instructions per second has been over 50% per year. At the same time cost has gone down dramatically, computing cost per unit dollar (bits per second/1987 dollars) has dropped on an exponential slope going from a slope of 7X per decade to 16X per decade to an estimated 4000X per decade. In other words expect a computer 4000 times better in the year 2015 for the same cost in constant dollars as paid in 1996. MMX technology promises even greater processing speed in the future. [11]

There has certainly been a revolution. The elements of the revolution are speed, images and availability. The engine is the computer. It is the power of the computer to process billions of "symbols" and assist the human race in capturing multitudes of facts as well as determining their relationships. The resulting plethora of information is result of the computerization of large segments of the world. The effects of this massive growth are

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the weakening of the hierarchical structure of society as the rapid exchange of information facilitates transnational enterprises and erodes traditional national sovereignty.

Information Warfare

In the world of national security and in the military component of peacekeeping operations the "computers everywhere" [12] phenomenon has created a new school of war -- information war. Information war must be understood in terms of information as both the means and the media. It is not simply better information to guide tactical weapons for attack, it is the use of information as a weapon. This concept has been called by some the 6th revolution in military affairs (RMA) and compared in impact to the Nuclear RMA of post World War II. [13] The significance of information warfare for future operations is only now beginning to be understood. Current thought, at least in the U.S. Army, is that information operations have a place at all echelons and in all types of operations, including peace missions. The further development of the notions on how to apply military information operations at different levels of defense activities poses significant challenges. In particular, nations need to understand the potential relationship of armed force, diplomacy and information operations in the world of peacekeeping.

Before going further it is important to develop a definition of information warfare. First, for the purposes of this paper, information warfare and information operations will be assumed to be synonymous. There is in fact little difference in the accepted Department of Defense definitions, and it seems a bit incongruous to discuss "warfare" in the context of peace operations. Current definitions are as follows;

Department of Defense: "Actions taken to achieve information superiority in support of national military strategy by affecting adversary information and

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information systems while leveraging and defending our own information and information systems." [14]

US Army: "Continuous military operations within the military information environment that enable, enhance and protect the commander's decision cycle and mission execution to achieve an information advantage across the full range of military operations. Information Operations include interacting with the global information environment and exploiting or denying an adversary's information and decision systems." [15]

Air Force: "Any action to deny, exploit, corrupt or destroy the enemy's information and its functions; protecting ourselves against those actions; exploiting our military information functions." [16]

All of the foregoing definitions are flawed because they do not address the fundamental component of information operations -- the how- - they simply state the results. With reference to the taxonomy of information proposed earlier in this paper, the following definition for information operations is proposed:

*"The intentional presentation, distortion, alteration or denial of facts or data in a manner to **profoundly affect their interpretation** (into information) as well as the gathering of data to understand all aspects of the environment in much greater fidelity than any potential adversary."*

This very broad interpretation provides a neutral definition of information operations. The unspoken assumption is that one would want to influence the interpretation of facts in a manner that furthers one's own ends. It also includes the

possibility of presenting the facts truthfully to ensure that all parties are operating from the same basis of information - a critical element in peace operations.

As with the definition of information operations, the proposed components or tools are equally disparate. Dr. Martin Libicki of the National Defense University proposes seven forms of information operations; command and control warfare, intelligence based warfare, electronic warfare, psychological warfare, hacker warfare, economic information warfare, and cyberwarfare.[17]

Command and control warfare is a coordinated effort to deny the enemy the ability to control his forces by "decapitating" the leadership. Without the ability to communicate objectives to units and receive feedback on unit status the thought is that the military machine will grind to a halt. Intelligence based warfare is the classic sensor to shooter linkage. Intelligence is applied directly to combat operations as opposed to acting as an input to the command and control process. Electronic warfare deals with domination of the electromagnetic spectrum by denying, exploiting or altering data contained in communications. Psychological warfare is the battle for control of perceptions of reality. Psychological warfare targets belief systems of individuals, groups and entire populations. The current technologies allow much greater flexibility in altering populations' perceptions of reality. Skewing the presentation of data can force certain interpretations.

Hacker warfare is typically non-military. It involves the sometimes illegal entry into computer based information systems to modify or destroy data. It is often done for personal reasons or as a method to gain an advantage over real or perceived adversaries. Economic information warfare is a result of the globally interconnected financial world. As GEN Sheehan (CINCUSACOM) pointed out during a recent visit to his headquarters,

65% of the worlds' capital is stateless.[18] This fact makes the destruction or significant damage a nation's economy potentially only computer keystrokes away. Libicki's notion of cyberwarfare encompasses the science fiction aspects of information warfare. He includes HERF guns and a variety of yet to be developed technologies in this category of attack.[19]

The US Army postulates that information operations consists of six components, psychological operations (PSYOPs), electronic warfare (EW), operations security (OPSEC), computer attack/defense, deception and physical destruction of information nodes.[20] The US Air Force outlines information operations tools as psychological operations (PSYOPs), physical destruction, deception, information attack, security measures, physical destruction, information attack, and electronic warfare.[21] The service definitions of information operations' components are reasonably compatible with Libicki's explanations.

Dominant battlespace knowledge is another concept that fits with information operations. It is the positive side of information operations, the knowledge that an actor has over other actors. Dominant battlespace knowledge is not simply knowing a little more about the other actors, it is having an overwhelming knowledge differential.[22] In simple terms, one actor may know your name, but you know his wife's name, where he lives, the kind of car he drives and what credit cards are in his wallet. In terms of peace operations, dominant battlespace knowledge is an intimate understanding of all aspects of the situation, political, economic, military and social from the various viewpoints of the belligerents. Measuring this is a difficult proposition, as the old saw states, " You don't know what you don't know." Perhaps the only measure of effectiveness is the

appropriateness or correctness of an action or response to a situation or event. An entity with dominant battlespace knowledge will accrue a much higher percentage of "more correct" actions or responses over time than adversaries with less knowledge. This higher percentage of correct responses should equate to success. Because of the plethora of variables inherent in human interaction the effects of dominant battlespace knowledge may be something only measurable after the fact.

As the foregoing indicates there is a general agreement on the components of information operations. The notable exceptions are Libicki's addition of economic information warfare and cyberwarfare and his omission of information security. Equally notable is the military addition of physical destruction. Both are explainable in terms of scope. The military services tend to focus on tactical and operational issues. Economic information warfare is simply not in their charter. Libicki's omissions are a result of his strategic concentration where physical destruction is hardly viable diplomatic tool.

Examination of these tools in terms of permanence of effect will help set the stage for there use in peace operations.
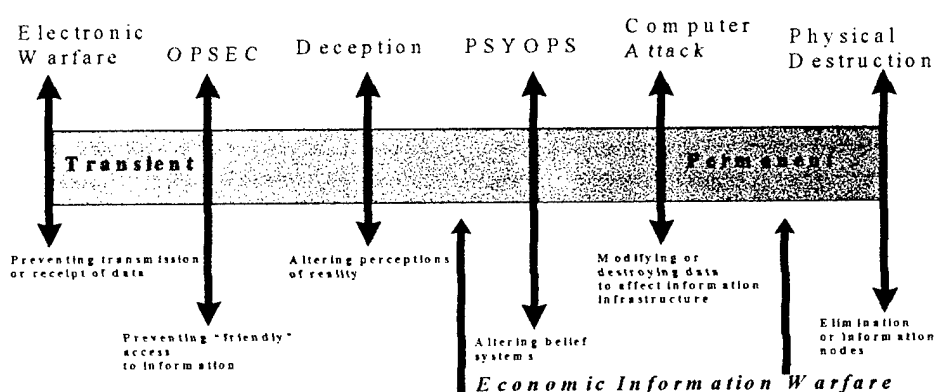
Figure 2. Permanence of Effects

Classic electronic warfare, jamming and communications deception, is a transient phenomenon. When the jammer is turned off, the effects on reception end. There may be lingering after-effects as communications networks recover from the jamming, but in most cases the recovery time is in minutes. A case in point is the Soviet and Warsaw Pact jamming of Radio Free Europe for so many years. Even with powerful jamming, there were times when the signal got through and the information starved citizens of Eastern Europe were treated to another view of the world.

Operations security and deception share the next portion of the transience scale because of the dependence of security and deception on so many fallible links in the system, particularly human links. Even with near perfect security of information, simple observation of patterns of movement or behavior may compromise operations security.. Psychological operations can be very persistent when conducted properly. The difficulty in having someone change their mind when they are "true believers" is legend. A properly conducted PSYOPs campaign can cause people to modify their belief systems or adopt new beliefs. The persistence of PSYOPs is comparable with the persistence of rumors and gossip. Both are nearly impossible to stop and need not be based on facts. Destruction is the most permanent. While information nodes can be replaced or reconstructed, the destruction of a node is permanent in the short term. Redundancy can provide network resilience but at some point continued destruction will overcome the ability to reconstitute.

The preceding chart provides a model that assesses the permanence of effect on a society's information systems. It begs the question of the effectiveness of the tool against different kinds of societies. Information operations are not particular to any technology.

The Mongol Army in the 12th and 13th century used "arrow riders," a group of fast horseback messengers, to provide situational awareness to far flung portions of their army. At the same time the Mongols specifically targeted enemy messengers to prevent the flow of information in the opposing forces.[23]

The Sepoy mutiny of 1857-58 provides another example of information operations. The Sepoys (Indian native soldiers in the British Army) mutinied when they believed that the British were using animal fat to lubricate rifle cartridges -- misinformation provided by the Sepoy leaders to inspire the revolt. The Sepoy's Hindu religious beliefs prohibited contact with this fat. Even though the British protested and in their mind proved that the coating was not animal fat, the Sepoy soldiers continued to revolt. Their religious beliefs were more compelling than the facts provided by the British.[24]

As illustrated, information warfare can be waged at different levels against any type of society, but some tools are more effective against certain types of societies. The following chart illustrates this premise.
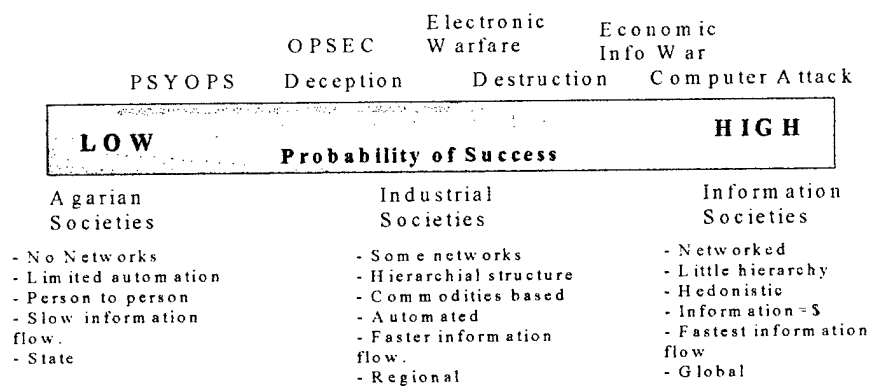
		Electronic	Economic
PSYOPS	OPSEC	Warfare	Info War
	Deception	Destruction	Computer Attack

| LOW | HIGH |
| Probability of Success | |

Agarian Societies	Industrial Societies	Information Societies
- No Networks	- Some networks	- Networked
- Limited automation	- Hierarchial structure	- Little hierarchy
- Person to person	- Commodities based	- Hedonistic
- Slow information flow.	- Automated	- Information = $
- State	- Faster information flow.	- Fastest information flow
	- Regional	- Global

Figure 3. Levels of Effectiveness vs. Type Society

This model borrows from the Toffler's book, <u>War and Anti-War</u>, the definitions of the potential "states" of societies.[25] Two factors have to be noted, first the scale is a continuum, an agrarian society may have some elements of an industrial and information society and vice versa. Although over-simplistic in the portrayal of types of societies, the chart serves the purpose of illustrating the effectiveness of different components of information operations across the spectrum of potential societies. In other terms the nature of the society defines its susceptibility to certain information operations tools.

PSYOPs is effective against societies not yet completely in the information age because of the limited ability to cross check facts. The flow of information is slow and influence is based on interpersonal relations, a perfect target area for PSYOPs. Slow information flow allows ideas to become set before contradictory information can be assimilated. The psycho-social theory of cognitive dissonance indicates that when ideas have been integrated as part of a belief system contrary information is discounted or modified to fit.

OPSEC and deception begin to gain effectiveness as a society's information technologies begin to mature but still are fully developed information systems in terms of multiple sources of input and processing power. A society with limited ability to sense the environment and collate the results makes security a simpler proposition and can be more easily deceived. The more information tools a society gathers the harder it is to remain secure and conduct deception operations. On the other hand, a society with little or no information infrastructure requires deception a village at a time.

Electronic warfare and destruction begin to be more effective when a society develops an information infrastructure. Preventing transmission of data or distorting transmitted data in conjunction with the destruction of the information infrastructure can cause devastating effects. The combination of the two efforts prevents coordination of goal oriented activity in a society. Without instructions and feedback leaders and followers are unable to progress.

Computer attack is effective only when there are computers to attack. It should be obvious that the more reliance a society puts on automation, the more vulnerable they will be to computer attack. Entering computer databases of an information society and altering or destroying information could produce catastrophic effects.[26]

Blending the two charts together one can begin to understand their use as tools in planning information operations for peacekeeping in terms of level of force (permanence) and method of attack (type society). Consider the need to cross the "Great Divide" as described in Appendix A in an agrarian nation. Examining the information operations tools as illustrated in the foregoing charts, one immediately sees the need for a comprehensive PSYOPs program to move the conflict from peace enforcement or peace imposition to peacekeeping.

Information is the product of compiling and interpreting facts and data. Information operations attempt to influence the interpretation of the data to cause a desired understanding of the data and compel action or inaction based on that understanding. The information tools available, PSYOPs, OPSEC, deception, electronic warfare, computer attack and physical destruction all interact with different components of the information infrastructure to cause that desired understanding. The combination of these information

tools to achieve synergistic effect is the goal of information operations. The application of these information tools to significantly contribute the success and efficiency of peace operations is addressed in the next section. However, based on the foregoing one can already begin to see that information operations have a flexibility and an inherent efficiency. Imagine one person, one computer applying economic or financial sanctions against a belligerent to leverage a peace agreement. Obviously this is less costly than a naval blockade. In another scenario imagine a fifteen or twenty person electronic warfare unit jamming hate broadcasts and replacing them with other programming to prevent conflict. These are two small examples of the possibilities for information operations during peace missions. The next section will examine other possibilities.

SECTION IV. Information Operations and Peace Missions

"Information is power. In today's turbulent international environment, knowledge of world events and secure information architectures are crucial if crises are to be averted or responded to quickly."[1]

Secretary of the USAF Widnall

"Dominant battlefield awareness is information about an (adversary's) national-level political, economic, military and social systems to successfully operate against these systems to accomplish strategic political and military objectives."[2]

Daniel T. Kuehl

Introduction

In the preceding sections, a clear framework was established showing the relationships between the Post Cold War world; increasing need and costs of peace operations, and the maturation of the information revolution. This section explores the possibilities of harnessing information operations to help cross the "great divide" between UN Chapter VI peacekeeping operations and UN Chapter VII peace enforcement operations. The ability

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to move from peace enforcement and peace imposition back to peacekeeping is the key to reduction of dollars and forces expended in keeping the peace.

Information Operations - Peace Missions

In an earlier portion of this monograph, information was defined as, *"symbols conveying the relationship of facts or data"*. Following that definition, information operations were characterized as ,*" The intentional presentation, distortion, alteration or denial of facts or data in a manner to profoundly affect their interpretation as information, as well as the gathering of data to understand all aspects of the environment in much greater fidelity than any potential adversary ."* As discussed in the preceding section this definition has both an offensive and defensive flavor. In peace operations both aspects provide critical components to success. The information tools available for information operations in support of peace missions remain the same as conventional information operations but with a different orientation. In many cases peace operators will not be trying to manipulate data to present a false picture, they will be trying to get a more accurate accounting of events to the leadership and population of the parties to the conflict.

Theory

In traditional warfare, Clausewitz defined war as "an act of force to compel the enemy to do our will."[3] In peace operations the international community is attempting much the same thing, to compel the belligerents to cease fighting and thus restore peace. The belligerents are attempting to achieve their goals through the force of arms and are thus bound by the generally accepted formula for the generation of force, < Force = Means X Will. The vector symbol on Force symbolizes the purpose for generating force, e.g.,

ethnic cleansing or to seize territory. Will includes the desire of the leaders and population to continue conflict until the objectives are realized. Will also includes the ability to use the means to apply force. The means are the tools of conflict. In conventional warfare one can destroy means or defeat the will through use of combat and thus negate the force. Peace operations imply a need to attack this equation in a manner that limits violence and leads to a stable peaceful environment. Wholesale destruction of the means or attack of the people's will may restore peace in the short term, but does not contribute to long term stability. In a sense, peace missions need to preserve enough of the belligerents means to allow confidence in their own security. At the same time peace operators must modify the will or change the force vector to minimize the chance of future conflict and restore stability. Information operations provide that flexible tool to accomplish these tasks. A closer examination of the information tools in the context of peace missions will provide a more detailed understanding.

Psychological operations or propaganda is a key component of information operations during peace missions. By changing either the leadership or the population's view of reality, the will to continue to pursue goals through violence can be modified. The "Force" vector can be changed from one of violence to one of cooperation. In spite of the negative connotations of propaganda and the implication that somehow mind control or brainwashing are central elements, PSYOPs is a valuable and legitimate tool. Many of the communal conflicts and much of the ethnic violence around the world has been spurred by propaganda campaigns. Usually these campaigns are initiated by failed leaders attempting to draw attention away from their failures, or groups attempting to gain power by

overthrowing current social structures, e.g., Rwanda and Burundi.[4] Certainly if PSYOPs can be used to spur violence, it can be equally used to help suppress violence.

As described in the earlier discussion of a proposed taxonomy of information, the cultural and social backgrounds of societies provides the mental model for their interpretation of observed data. These shared mental models comprise a belief system. Belief systems and knowledge systems (scientific based information based on purely logical interpretation of observed data) are both components of human decsionmaking. In fact belief systems of a society may be more compelling than a presentation of the truth.[5] PSYOPs is intended to modify belief systems to allow reception of data and assist in the interpretation of data in a fashion that assists the peace operation.

PSYOPs is the "struggle for men's minds."[6] It uses images and ideas to change the convictions or modify the belief systems (values) of a population and its leadership. Modern computer technology provides a massive advantage in generating images that capture the imagination. The use of computer "morphing" to animate objects or paste disparate images together provides a method of creating lifelike images with no basis in reality to support a PSYOPs campaign. There are several principles for effective PSYOPS in peace missions; content, timing, and coupling with national policy.

To be effective PSYOPs must seize on ideas that capture the imagination of the common person or the ruling elite. In underdeveloped societies, the population often looks to the ruling elite for cues on how to respond. However, the information revolution has diffused power downward to individuals, lines of national authority have weakened as information technology has allowed direct contact with the population without government filtering.[7] Technology now allows peace operators to talk directly to the population and

paint a picture of a peaceful resolution of the conflict. The imagination of the common person can be captured by a description of a secure, stable environment with opportunity to achieve personal and national goals.

Timing is critical in PSYOPs. No idea should be introduced before its time. The belief system of a culture was not developed overnight and certainly cannot be changed quickly. Ideas expressed at the wrong time will not find resonance with the population and may have negative effects. For example, communism appeals to populations that have suffered under economic systems of great inequality, e.g., Nicaragua in the 1970s and 80s under Somoza. PSYOPs ideas not directly related to the life experiences of the target population are destined for failure.[8]

The final and most problematic issue is the relationship of political policy to ongoing PSYOPs efforts. One cannot talk about feeding the people while denying foreign aid or about peace while arming the population. The tight linkage of PSYOPs with political actions is essential in peace missions. Political, military or economic policy that is at odds with the PSYOPs message destroys the campaign.

A recent example of political policy at odds with PSYOPs is in Somalia. Ambassador Oakley put forth great effort in a PSYOPs campaign to explain to the people that peace forces were in place to guarantee the safety of relief workers and supplies. This notion was effectively countered by the unrelenting manhunt for Aideed by the same "peace" forces. The pursuit of Aideed was hard to reconcile with the PSYOPs messages relating to the security of relief workers.[9]

Electronic warfare seems to be a foreign concept to overlay on peace operations. The utility lies in the ability to monitor and control the over-the-air transmission means of

data in a region. As described in the earlier definition, the control of data is the heart of information operations. Electronic warfare assets allow the control of wireless transmissions as well as contributing to the gathering of data to contribute to the peace operators dominant "peacespace" knowledge. The use of radio and television as tools for PSYOPs, coordination of disruptive activities and attempts to gain advantage in unresolved areas of peace accords is common in peace missions. Electronic warfare can assist in denying, disrupting or monitoring violations of peace accords. In Bosnia the fact that the US could monitor, locate and jam all of the former belligerents communications played a significant role in confidence building. The idea that all were under radio observation fostered the idea that the accords were uniformly enforceable. [10] In the equation for generating Force, electronic warfare attacks the multiplier between means and will. It prevents the transmission and coordination of the will and the means thus providing a useful disjunction to slow or stop the cycle of conflict.

Operations Security (OPSEC) is a two edged sword in peace operations. On one hand, force protection of peace operators is critical. On the other, transparency of operations insures that there are no misunderstandings of peace operator actions or motives. The balance is critical. Perhaps it is easiest to consider the trade-offs on a sliding scale associated with risk. The closer to international war the peace operation moves the more OPSEC is essential. In a peacekeeping mission, transparency of operations will predominate, in a peace imposition mission OPSEC would predominate. In cold, but realistic terms international support of the peace operation is based on the fact that any violation of peace accords must clearly be caused by the former belligerents. If it appears that somehow the peace operators are at fault, support will diminish and the peace mission

may be withdrawn. A peace operation that draws a violent reaction because OPSEC allows misunderstanding by the parties to the accord may doom the peace mission. OPSEC does not directly contribute to the modification of the means or will. Indirectly it enhances the notion of omnipotence of the peace force by denying potential adversaries' weaknesses to attack. This can affect the will to continue the conflict simply because of the ability of the peace force to enforce accords without exposing vulnerabilities. OPSEC prevents any of the belligerents from gaining an advantage.

Computer attack is a misnomer for computer operations in support of peace missions. In a region with a fully developed information infrastructure, peace operators can use computers to monitor the cyberspace activities of the former belligerents. The financial activities, cyberspace contacts and other portions of the information infrastructure will provide indications of compliance with peace accords. Although monitoring is the normal state, peace operators may be called upon to intervene and prevent transactions that are in violation of peace accords or that may cause situations incompatible with peace. The peace accords and rules of engagement developed for intrusion into the national information infrastructure and potential modification of data will govern cyber-actions by peace operators.

Defense of peace operator computer systems is also important. Elements of former belligerents may have a desire to cause the failure of the peace mission. Entry into peace operator computer systems and alteration of data may cause actions or reactions that jeopardize the peace mission. Computer attack provides a method of affecting both means and will. Prevention of funds transfers or contact without outside parties instigating further violence directly limits the means available to belligerents. The use of computers

to provide objective reality and expose the often self-serving and political motives of the leadership to continue the conflict may sap the will of the population for continued support of violence to achieve political ends.

Physical attack of information nodes is the least desirable of all information operations techniques during a peace mission. It may be necessary as a rapid response to a situation that is out of control, but the negative impact will potentially be significant. As with OPSEC, the closer one gets to open warfare, the more acceptable physical destruction of information nodes becomes. During a peace imposition operation, destruction of the belligerents' ability to coordinate and control forces in the field may be the quickest way to end or at least limit hostilities. Physical attack destroys the means and will in direct terms. To restore peace in Bosnia required destruction or artillery systems and anti-air radars to make the point that international will would be enforced. The continued destruction clearly influenced the willingness to continue fighting. This is surely the most direct method of affecting means and will, but it also contributes least to stability. The hatreds and tensions that inspired the conflict may be forced down temporarily but will not be resolved by destruction.

Economic information warfare is useful in peace operations as a lever against developed states, but in humanitarian type peace missions it is not usually practical. In most cases humanitarian peace operations end naturally in some kind of nation building mode. The destruction of earlier violence must be repaired and the social or international problems that caused the conflict addressed. To add economic information warfare as a tool to continue degradation of the economic infrastructure seems to defeat the purpose. An exception could be a peace imposition mission. The peace imposition mission against

Iraq used an economic embargo as a tool to limit the resources available to a belligerent.[11] This use of economic information warfare to freeze assets and deny access to international banking provides a tool to cause the suspension of hostilities and force negotiations. Economic information warfare is an attack on the will of a belligerent. By making it economical painful to continue to seek goals through force of arms, a belligerent can be compelled to accept international desires for peace. Economic information warfare can change the vector of force from conflict to cooperation as the means and will are turned to achieving economic goals.

To paraphrase a current U.S. military concept Dominant "Peacespace" Knowledge (DPK) provides the peace operator with overwhelming information superiority. This includes not only a detailed understanding of the current situation and the array of former belligerents military forces, but a complete grasp of the history of the situation and the intricacies of the cultural aspects of the violence -- the belief systems. The peace operator should appear omnipotent in terms of surveillance and observation of the former belligerents' actions. The fact that no peace accord violation will go unnoticed and that the peace operator remains neutral in surveillance over all parties contributes to an atmosphere of trust. The strict neutrality and ability to monitor all actions allow the peace operator to be viewed as a repository for the "truth." It was illustrated repeatedly in Bosnia that a factual description of events untarnished by attempts to gain advantage by former belligerents was critical to defusing volatile situations and preventing further violence.[12] As in many cases dealing with strong human emotions, the truth is often the first casualty in peace operations. Dominant peacespace knowledge provides the tool to present factual

information about events to all parties, monitor actions, and protect peace operators from potential harm.

As the foregoing indicates, the tools of information operations have great utility in conducting peace missions. Effective use of these tools in an integrated campaign can reduce the cost of peace by creating time and space for alternative courses of action, controlling the level of violence, and filling a gap between inaction and use of deadly force.[13] To achieve integration of these tools to realize these outcomes requires a unifying framework.

Framework

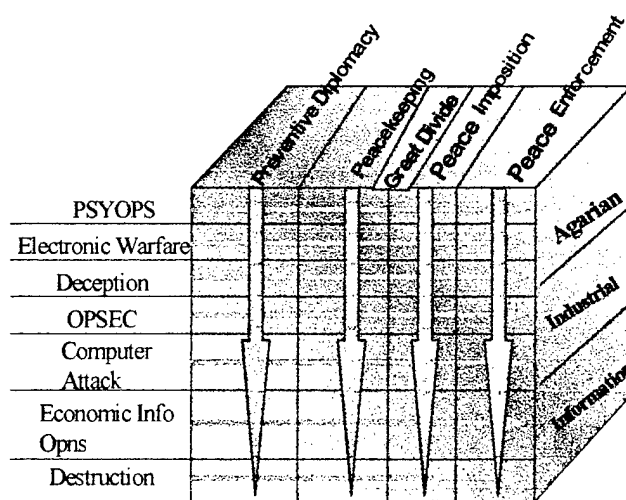Combining the information provided earlier in the monograph, leads to the following model.

Figure 4. Integrated Model for Information Operations in Support of Peace Missions

This model overlays the components of information operations, the simplified types of societies and the different types of peace operations. It allows one to enter at any

point and begin to understand the interactions of the variables and potential choices available for an effective information campaign. Understand that the three-dimensional box shown here is simply illustrative; to be used as a thinking tool. There is no intent to match-up the different possibilities, merely to show that there is a relationship. This illustration simply provides a unifying mental picture.

The idea of using information operations to fuse military action with foreign policy in peace operations is based on the notion of "soft power." "Soft power" is the "ability to achieve desired outcomes through attraction rather than coercion. It can rest on the appeal of ideas or the ability to set the agenda in ways that shape the preferences of others. "Soft power" calls for the establishment of international institutions that encourage states to channel or limit activities, eliminating the need to expend economic or military resources for keeping the peace."[14] Gaining and holding an information advantage is a way to defeat or deter threats at a relatively low cost.[15]

The model provides a framework to gain the information edge during peace operations. Use of "soft power," ideas versus hardware, provides a method for resolving international disputes positively. Using the past as an indicator of the future, many post Cold War international disputes settled predominantly by military force have left a bitter legacy. Somalia and Haiti provide examples of countries that did not respond to the "cardio-pulmonary resuscitation" of military force. All remain economic basket cases with ineffective (in Somalia nonexistent) governments and continued violence. The need for follow-on efforts is largely a result of the culture and belief sets of the country. Nationbuilding in this case calls for a fundamental change in the nature of the belief systems. This can be accomplished over time at a relatively low cost by information

operations or more quickly at a higher cost by buying a national infrastructure and educating the people. Radio Free Europe and its clones have changed the beliefs of thousands of citizens around the world. In China, the US Information Agency is the primary source of news for over 60% of the population.[16] The access to information about the world changes perceptions of reality.

Examples Of The Model

In Somalia a public outcry caused the world to respond to a perceived disaster. Although the information was not totally accurate, the graphic portrayal of starving children galvanized the world to do something. UNOSOM I was the first United Nations force introduced to the country. The objectives were to establish security, assist non-governmental organizations and private volunteer organizations in humanitarian relief and set conditions to restore law and order. UNOSOM I arrived with little preparation of the Somali population for UN intervention and failed to accomplish the mission.

Some observers felt it was from a lack of sufficient military force to handle the lawless situation. The United Nations then authorized UNITAF and in the resolution stated that UNITAF would be a robust force authorized to do whatever was necessary to accomplish the mission.[17] UNITAF, led by the United States Marine Corps, was successful in the short term, but the limited life of UNITAF and the lack of any program to modify Somali cultural models led to a second failure to stabilize the country. As is evident from the headlines, the conditions for the restoration of law and order were not met. Many reasons can be given to explain the failure of predominantly military missions to achieve peace in Somalia. One possible explanation is the lack of an integrated information campaign to exercise the notion of soft power. Some would argue that the

clan structure and the attendant intense loyalties in Somali were the causes of national disintegration and that information operations would not have changed the outcome.

Some information operations were conducted by both United Nations forces and the Somali warlords. Ambassador Oakley did use PSYOPs to prepare the Somali populations in areas where UNITAF forces would be occupying. His success was apparent in the acceptance of the local population for these forces.[18]

Aideed, a Somali clan leader, effectively exploited cellular phones and human communication systems to thwart US attempts to capture him. He used CNN to track US policy and operational plans and develop his strategy for attacking U.S. forces. The ambush in Mogadishu and the international television broadcast of US casualties being dragged through the streets effectively destroyed US public will to continue in Somalia.[19]

An information campaign in Somali could have followed this rough outline. In an agrarian country PSYOPs can be effective. It must seize on ideas that capture the imagination of the people. This propaganda campaign should focus on the common person and provide simple explanations for complex problems.[20] In Somalia, the nature of the clan system probably prohibits calling for a unified "Greater Somalia." A better approach may have been to stress the relationships of the clans and provide a foundation for the concept of shared rule. Electronic warfare could have limited the effectiveness of the Somali electronic communications systems, thus providing more security for United Nations forces and preventing coordination of hostile acts. Computer attack and economic information warfare are not suited for a country in this state of disarray. Physical destruction would have provided little positive effect. Targets were diffuse and hard to

identify. It is arguable that information operations would have changed the outcome significantly. We only know that military force alone did not.

In Rwanda a coherent information campaign could have potentially limited the cost in human lives and helped focus the humanitarian effort. Rwanda falls into the category of peace enforcement overlaid with humanitarian assistance. The warring Hutu and Tutsi tribe members were bound together by a national constitution and the recognized sovereignty of their country. United Nations forces intervened to provide humanitarian assistance and to provide a force that encouraged the Hutus and Tutsis to adopt more peaceful measures to resolve their differences in consonance with their own constitution.

Much of the initial bloodshed was caused by intense propaganda (PSYOPs). Both Radio Rwanda and Radio Burundi, the national radio stations controlled by the government used the airwaves to flame the fires of ethnic hatred. Jane Stanley, BBC correspondent to the region, states that the national radio has been associated with genocide and the people do not trust the media.[21] Rwanda has only 14,000 telephones, but over 500,000 radios.[22] A combination electronic warfare and PSYOPs campaign in this agrarian nation could have been very effective. First, electronic warfare could have suppressed the Hutu broadcasts calling for attacks on civilians and naming those to be killed by the death squads. Other international agencies could have used the radio or other media to broadcast the true selfish motives of the tribe members attempting to overthrow the government and gain power by encouraging genocide. The other half of the equation is the determination of the precise nature and size of the crisis. Information about precisely what is occurring is critical to structuring an appropriate response. The graphic and often inaccurate portrayal of the Rwandan catastrophe by the international media spurred the

world to action only after several false starts and miscues. Accurate, timely and comprehensive information on the nature and scope of the crisis is essential for an effective response.[23]

Using the models shown earlier, one could postulate that computer attack and national economic information warfare was inappropriate for this situation. PSYOPs and electronic warfare, one seeking more permanent changes in belief systems and the other a temporary halt to hate broadcasts were ideally suited for this situation. Physical destruction of broadcast facilities was an option, but probably not suitable for the situation.

Using the model proposed above, one sees the potential for effective use of electronic warfare, PSYOPs, and intelligence in limiting or preventing a crisis as well assisting in structuring an appropriate response.

Initial turbulence in Bosnia was inspired by the effective use of the media to incite racial and ethnic hatred. Milosevic, a Serbian leader, effectively used television broadcasts to ignite dormant hatred. Vreme, a Belgrade weekly newspaper, called the war in Bosnia-Herzegovina a "television war." During the attempts by the US to stop the violence in the country, the Serbians used CNN as a method of predicting US response.[24] The net effect was that mass media provided a forum for the initiation of nationwide violence. In De Caro's terms, "Hostile use of global television to shape a nation's will by changing it's vision of reality."[25]

Information operations in Bosnia have helped in moving the situation from one of peace imposition to peacekeeping, crossing the great divide and thus saving economic and military resources. The Dayton Accords provide an example of how information superiority was critical in resolution of the situation. The fact that the US has the technical

capability to monitor the actions of all the parties provided a basis for confidence in enforcement of the Dayton Accords. Detailed maps of the area produced by information technology assisted in the structuring of the boundaries and travel route by eliminating areas for misunderstanding.[26] The Dayton Accords also provide a section that empowers the Implementation Force (IFOR) commander to control the electromagnetic spectrum of the country.[27]

The use of radio and television broadcasting is a critical element in the Accords. One excellent example of information operations in Bosnia is the radio talk show hosted by Colonel John Batiste, a U.S. brigade commander in Bosnia. The show takes call-in questions from listeners and fosters an atmosphere of trust and improve relations between NATO peace forces and the former belligerents. The show is focused on improving communications with the Bosnian Serbs, some who feel the Dayton Accords shortchanged them. It also provides a vehicle to reinforce the idea of peace force impartiality. Radio Vlasenica, the programs host station, estimates that about 1,000 of the 20,000 households in the region tune in to the show. Colonel Batiste believes that this show can influence the population to ignore Serbian leaders calls for continued conflict. Batiste says, "I think there is hope. The leadership wants (the Dayton Accords) to collapse for their own selfish reasons. But the common individuals are tired of war."[28] This example provides an excellent illustration of a very subtle PSYOPs campaign using information technology to reach directly to the population bypassing the leadership hierarchy.

Using the model again, in this case an industrialized nation and United Nations forces deployed on a peace enforcement mission with little humanitarian requirements the information operations requirements are different. The more military aspect of this

mission opens the door for physical destruction of information nodes. The presence of a rudimentary national information infrastructure could permit computer monitoring or attack. PSYOPs and electronic warfare are both possible but the effects could be limited by two factors. First, the ability of the belligerents to mount significant counter-PSYOPs campaigns. Second, the variety of communications means available may limit the effectiveness of electronic warfare. This is not to say that these tools are useless, merely less useful that others. In the case of the Former Yugoslavia, economic information warfare can be an effective lever against the spin-off states to insure compliance with the peace treaty. Freezing overseas assets, controlling financial institutions international transactions and the threat of manipulating economic computer databases can be effective in channeling aggressive moves by the belligerents into more pacific actions. The foregoing examples provide some concrete examples of how the model proposed can unify thinking on the conduct of information operations during peace missions. From the model and examples some principles for information operations in support of peace missions emerge.

Proposed Principles of Information Operations for Peace Missions

Transparency of Operations

Peace operations are based on the idea of trust. The peace operators brought into a region to stabilize a situation objectively. Parties to a conflict should not be surprised by the actions of peace operators. This insures a minimal opportunity to misunderstand actions. Information about ongoing and proposed operations should be provided to all former belligerents. Convoys and evacuations should be announced ahead of time to prevent confusion about cargoes, purposes or destinations.

This principle seems contrary to the information operations tool of OPSEC, the protection of friendly forces. The closer one moves to unrestricted warfare transparency in operations becomes less desirable. During peace enforcement and peace imposition operations, transparency of operations becomes a decision for the peace forces commander. On one hand prior knowledge of troop movements can prevent overreaction by former belligerents, on the other it can endanger peace operators. The balance between force protection and maintaining the peace is precarious.

Information Sharing

At strategic and operational levels the peace operators will normally have access to much more information than the former belligerents. The belligerents myopic view of the conflict and reluctance to internally share information (information is power) contribute to a fragmented look at the operational situation. Sharing this information to the extent consistent with force protection increases the level of confidence and security among the former belligerents. As Martin Libicki points out information can provide the equivalent of "looking over each other's shoulders." While this may not eliminate conflict it certainly inhibits aggressive impulses and prevents violence based on misunderstandings.[29] To maintain neutrality, any information shared with one party must be shared with all.

Access and monitoring

To monitor effectively treaty compliance the peace operators must have access to the national information infrastructure and transmission means. This stipulation must be part of any negotiated peace accords. Access to national data bases provides a method of tracking potential treaty violations. As indicated in the earlier example of Bosnia, the success of the Dayton Accords was the fact that the US could monitor all of the parties to

the agreement to ensure compliance. This is crucial in any regions with a developed information infrastructure. Belligerents can gather in "cyberspace" to plan operations, gather allies, or spew hate propaganda. Arms sales and financial dealings over computer networks also provide clues on the aims of the belligerents.

Control of transmission means

Peace operators should have control of the transmission means for data in the region. Control simply means the ability to turn on or off communication networks as necessary to insure compliance with peace accords. Control of the national or regional transmission grid allows peace operators to prevent transmission of hate propaganda and inhibit coordination or planning for violent acts. The control of the information transmission infrastructure is a delicate issue of sovereignty and must be a part of any peace agreement. In most cases the peace operators will be unable to control all transmission resources. Therefore it becomes critical for a detailed analysis of the area information transmission capabilities to determine key nodes or centers needing supervision by peace operators.

Civil/Military Interaction

The ability to conduct information operations during peace missions is contingent on cooperation between civil and military agencies. We must purge the Cold War mentality of separating military and civilian information agencies. Together they can be powerful, flexible, and cost effective in furthering the completion of peace missions. Imagine the effect of combining the broadcast capability of CNN or US Information Agency with the ability of the military to neutralize internal hate propaganda media. Peace

operators could insure that the population has access to accurate and comprehensive information unbiased by belligerents' rivalry.

Intellectual linkage of international political goals to information operations

Information operations like all actions must be linked to goals. In the case of United Nations peace missions, linked to the goals of the peace mission. This linkage provides a unity of effort and assists in planning the use of the appropriate tools at the appropriate times. This issue is always to move from violence to peace and eventual removal of peace operators. The preceding paragraphs addressed methods and a framework for overlaying information operations on peace missions. Using this framework can information operations reduce the cost of peace missions ?

Costs and Benefits.

In Section II, we discussed the cost of peace missions and the "great divide" that separates Chapter VI United Nations peace missions from Chapter VII peace operations. This great divide is also a monetary divide. It is much more expensive to conduct peace enforcement and peace imposition. For example the observer forces (UN Chapter VI) average cost per year per mission is about $51.5 million dollars. For peace enforcement or peace imposition missions (UN Chapter VII), the cost about $109.8 million dollars a year per mission, more than double the costs of peacekeeping or observer missions.[30] It is clear that the faster peace operators can move a conflict from peace imposition to peacekeeping or peace observation the lower overall costs will be in not only dollars, but lives. Long term peace imposition or peace enforcement missions are by definition a failure.[31]

Earlier in the paper, the costs and value of keeping peace were described. In fiscal year 1994, peacekeeping and humanitarian missions cost the US $ 3.4 billion and about the

same amount in 1995 not including the Bosnian peace mission.[32] The value of course is stability and the resulting economic growth that improves worldwide standard of living. As indicated in Appendix A, during the relative stability of the Cold War, gross national products showed a significantly higher increases than during the unsettled period of the early 1900s. The issue at hand is how to keep the peace and conduct humanitarian operations within the limitations of national budgets that increasingly are focused on domestic concerns. The continuing information revolution provides an opportunity to achieve this goal saving not only money but also lives.

In Rwanda approximately one million Tutsi men, women and children were killed as a result of a propaganda campaign that demonized Tutsis. Using newspapers and national radio Hutu extremists warned the Hutus that the Tutsis were intent on enslaving all Hutus. This set the stage for the genocidal rampage of the Hutus. Preventive actions using information operations could have first, made the world aware of the impending crisis and second, countered the Hutu propaganda effort. Rwanda cost the US $335.1 million and cost the Tutsi's over 500,000 lives. The cost of employing radio intercept and jamming units, psychological operations organizations and mediators would certainly have been far more cost effective.[33]

In the former Yugoslavia, the US has a combat division, reinforcing units as well as a number of headquarters elements enforcing the Dayton Accords at the cost of over $ 1 billion a year.[34] As pointed out earlier, information operations have been conducted throughout the area to enhance the peace process and regional stability. As often pointed out during the planning stages of the intervention in Bosnia, ten German divisions could

not subdue the country in World War II, how would a 60,000 person implementation force succeed in 1995?

There are many factors, however one cannot deny that information technology assisted in the preparation of the peace accords and has materially aided in the enforcement of the peace. Colonel Batiste' radio show, the International Red Cross information programs, intelligence sharing with the former belligerents to provide transparency of military operations, all this and other information operations have reduced the levels of violence and obviated the need to deploy a substantially larger larger and more costly force (WWII experience of ten divisions) to subdue belligerents who wish to continue to seek political goals with weapons. No precise number can be placed on the cost savings, but if one division and ancillary units cost $ 1 billion then logically ten divisions could cost up to $10 billion a year.

Haiti provides a final example of the potential for preventive diplomacy using information operations. The psychological operation conducted by former President Carter and General Colin Powell with the Cedras government in Haiti prevented the need for an invasion by US forces. This psychological operation included description of the US forces involved and the forceful recital of US intentions. It went beyond simple diplomatic posturing and negotiations. The change from a forced entry operation to a cooperative deployment saved lives and averted potential destruction of an already crippled national infrastructure.[35] The information that the U.S. was prepared to invade the island to restore a democratic government coupled with the self interest was sufficient to prevent unnecessary bloodshed. Information operations can clearly contribute to either preventing escalation of conflicts or assisting in rapidly ending conflict by creating time

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and space for alternative courses of action, controlling the level of violence, and filling a gap between inaction and use of deadly force.

Information operations produce time and space for defusing conflict in the following ways. Information operations provide pre-crisis transparency. Information dominance clarifies the nature and type of threats and provides a basis for trust and cooperation among nations desiring peace. By rapidly organizing world opinion and support for peace operators, potential belligerents can be deterred from implementing violent solutions.[36] Information operations can also appeal directly to the population of potential belligerents without the filter of partisan governments or informal leaders. The explanation of events in clear terms to the populations may change their willingness to believe ethnocentric hate messages spurring conflict. When combined with prevention of the broadcast of hate propaganda, information operations can have a significant effect in giving negotiation time and space to be effective.

During peace enforcement and peace imposition missions the level of military force applied by peace operators may be significant. The more force applied, the less stable the situation and the less chance of the peace forces being viewed as neutral. In other words, the ability of military force being perceived as acting impartially declines directly with the amount of force used to accomplish missions. Information operations can assist in controlling level of violence in the interaction between peace operators and other parties. Transparency of operations provides basis for trust and an understanding of why using military force is necessary. It prevents misunderstanding of motives and intents of peace operator's actions. This understanding builds and atmosphere of trust and assists in controlling the level violence. Information superiority also implies observation of all

actions of involved parties. The mere fact of this scrutiny and potential exposure to the international media and the populations involved serves as a governor on violent actions. The alleged rape and murder of women in Bosnia galvanized the international community and damaged Serbian claims during the peace negotiation processes.

Most peace operations are spurred into action by a call for help from a nation or mobilization international will usually through United Nations mandates or sanctions. Often times the need to do something is more important than what to do. In particular, US policy outlined in Presidential Decision Directive 25 limits US involvement in peace missions until an endstate is provided.[37] A recent example is the conflict in Zaire with the demands for immediate intervention with little understanding of the situation or what needed to be done. Information operations can cover the gap between inaction and use of force. By stopping or reducing the flow of violence inspiring information from belligerent leaders to their followers and replacing it with more positive and accurate information international action occurs with little cost. This does not imply that at some point peace forces may not have to be introduced, it simply allows the intervening body a chance to reduce ambiguity of violent situations and prepare a flexible response appropriate to the situation. However it is possible that by denying the belligerents leadership media access to the population and with the population more aware of actual events and motives, violence may be prevented altogether.

Gaining information dominance or dominate peacespace knowledge may take some time but in the long term it will reduce the number of peace operators required and reduce or prevent casualties. The following chart indicates the reduction of soldiers

necessary to cover territory as information density rises. The same idea has application to

peace missions as a method of reducing forces necessary.
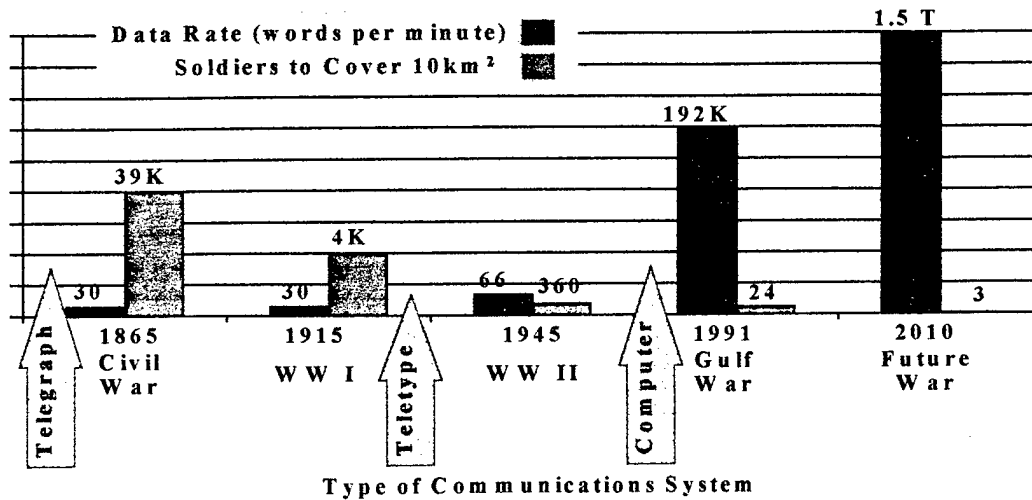
Data Transfer Rate vs. Soldier Coverage

Figure 5 Information Density vs Soldiers[38]

The increasing density of information on the battlefield is directly correlated to the

decreasing numbers of soldiers. Some may argue that the extended range and lethality of

weapons systems are a more reasonable explanation. This flawed argument fails to take

into account the increased information needs to target long range weapons and control

forces more dispersed as a result of increased lethality. On peace missions the increased

density of information available allows soldiers and units to be at the right place at the

right time to defuse violent situations. Repeated precision application of deterrent force

can quickly stabilize a region and dampen the ardor of belligerents for continued conflict.

The apparent omnipotence of the peace operators will naturally lead to less violence,

improved force protection and the need for less peace operators.

The information revolution and the evolving concept of information operations have added another tool kit for peace missions of all types. These tools when integrated and used properly will reduce the number of forces needed to monitor peace accords and will assist in the rapid transition of peace missions across the "great divide" from Chapter VII to lower cost Chapter VI peace operations.

CONCLUSION

"Today peace is a result of violence and is maintained by violence."[1]

A.A. Svechin

As Svechin points out so admirably peace in many cases is the result of violence or the threat of violence. That was the nature of the peace during the Cold War. Now the Cold War has ended and the world is in the throes of a profound change in the nature of society compounded by an information explosion. The combination of these two cataclysmic changes in the nature of international society can lead to a world where peace is maintained by information. Costing information operations conducted to keep peace is in many ways like trying to cost deterrence. If it works, the cost of not doing it will never be apparent. The following sections summarize four areas, the conjunction of information operations and peace missions, the argument that overwhelming force is all you need and an extreme view of international peace maintained by information and finally current status and recommendations.

Information Operations and Peace Missions

In international war, information operations imply seizing information dominance and exploiting this advantage to defeat adversaries. During peace missions, information

operations assume a sharing of information dominance with all parties to the conflict. Transparency of all operations as well as control of transmission means provides building blocks to establish the atmosphere of trust necessary for successful peace missions. If everybody has access to objective reality and a clear understanding of the intentions of all parties the chances of violence are reduced.

Dominant peacespace awareness allows us to deploy less forces to accomplish the same mission. Psychological operations permit modification of belief systems and assists in removing long term sources of conflict promoting stability after peace operators depart. Operations security and deception may be of small use in most peace operations, but as tools of force protection for peace operators these have potential application. Computer attack allows peace operators to prevent use of cyberspace as an arena for violence or preparations for violence. Monitoring a nation's computer information infrastructure can provide valuable information on intentions of parties to the conflict. Electronic warfare provides methods to control transmission of information that could contribute to continued conflict as well as providing a valuable tool to monitor former belligerents' activities. Economic information operations can provide a lever, like sanctions, to target selectively economic entities in a recalcitrant nation. In Haiti, blanket embargoes did not affect the wealthy they simply made life for the poor more difficult.

Each of the above contributes to lowering the cost of peace missions by reducing the numbers of peace operators and the level of violence. An effective information operations campaign can prevent conflict or assist in moving it across the great divide from Chapter VII to Chapter VI operations.

As Barry Blechman states, "A civil war is not ripe for resolution if contending factions are not yet convinced that the price of continued warfare exceeds any political gain."[2] Rather than waiting, nations must be proactive in providing means for populations to reestablish civil order and political authority. Information operations can set the conditions to pre-empt the selfish and often aimless political maneuvering by local power seekers by providing a forum for presenting objective reality while denying dissemination of biased and provocative accounts of events. By providing the population with a clear picture of reality, information operations can "ripen" a civil war, bypassing local warlords and showing the population the graphic costs of continuing conflict.

Information Operations -- Necessary for Peace Missions ?

Military peace operators believe that successful peace missions, particularly Chapter VII missions require a military force that can overwhelm the parties to the conflict if necessary. The UNITAF force in Somalia consisted of over 40,000 soldiers and by any accounts successfully executed the missions assigned. UNOSOM II the United Nations follow-on force in Somalia had only about 20,000 and by press accounts failed miserably, resulting in loss of life and the return of Somalia to anarchy. Conventional wisdom holds that the reduction in combat power between the two forces was the primary cause of the failure. Further analysis reveals two other significant causative factors. First, Somali warlords monitored the international media and understood that UNITAF had a limited life span. Second, local diplomat-mediators, including US Ambassador Oakley failed to mount an integrated information campaign in the context of the Somali cultural norms.

CNN provided Somali warlords with key information on UNITAF movements and plans allowing the warlords to flex with the operation and avoid confrontations. In this

case overwhelming combat power brought peace but only a superficial peace at great cost. Ambassador Oakley choose a wise course in his attempt to move the balance of power from militia groups to alternative civil institutions. However, an ill timed remark characterizing his strategy as "plucking the bird" was aired by BBC. Oakley stated that if you pull one feather out at time the bird does not notice, but before long it cannot fly. This reference to removing the power from the militia leaders infuriated the Somali warlords and damaged future mediation.[3]

UNOSOM II entered an environment where the Somali militia leaders had simply been waiting for UNITAF to leave and diplomatic mediators did little to motivate Somali leaders or people to abandon their violent quest for power over other clans. UNOSOM II was plagued by the traditional inadequate United Nations command structure and poor internal information flow. UNOSOM II did not know what the Somali's were doing and when they found out it was normally too late to counter it. The Somali people were unaware of any alternatives to the situation. Their primary source of information was the militia leaders and the clan elders. These leaders played on the notion of UNOSOM II as an invading force thus mustering support for expelling the invaders. The ambush of the Pakistani peacekeepers and the subsequent US/UN manhunt for Aideed confirmed for the Somali people the intrinsic evil nature of UNOSOM II. Added to this was the portrayal by the international press of Somali as complete anarchy overseen by an incompetent and inadequate United Nations force. The result of this perception was the withdrawal of peace operators and a return of the country to civil war.[4] Overwhelmingly military force kept the peace only as long as it was there. The lack of a culturally consistent information program working toward modifying belief sets and convincing the leaders and people that

the cost of further conflict was not worth potential political gains was obviously a factor in the failure of UNOSOM II.

The foregoing example illustrates the idea that force or the threat of force can maintain peace, but may not foster stability. Maintaining overwhelming force is also an expensive proposition. The use of information operations to gain dominant peacespace awareness, provides objective reality and assists in understanding alternatives to continued conflict obviates the need for massive forces assigned to peace missions. Dominant peacespace awareness implies that a minimum force can be applied where needed as opposed to trying to be everywhere. Providing objective reality to the parties in conflict will help defuse misunderstandings and counter attempts to paint situations in negative terms. Explaining alternatives to the leaders and population may defuse the perception of "all or nothing" conflict conditions. By appealing directly to the population without information filters, alternatives to violence can be disseminated. If these alternatives have resonance with the population, leaders will have difficulty attracting followers intent on further conflict. Leaders without followers are not leaders anymore.

Peace can be kept with force and the threat of use of force, this is one of the foundations of deterrence. Overwhelming force keeps the peace because of the potential of massive retaliation. In criminal theory, the premise for the deterrent value of punishment is based on severity and certainty. Studies have revealed that certainty of punishment provides more deterrent value than severity.[5] Overwhelming force provides severe punishment, information operations can provide certainty of punishment.

One View of Information Operations for Peacekeeping

Martin Libicki, a noted information warfare theorist at the National Defense

University, proposes a methodology for a world wide information "meta-system" that

would keep the peace by allowing complete transparency of operations that could threaten

world peace. The following paragraphs capture the essence of peace maintained by

information superiority.[6] Libicki contends that the information revolution military affairs

is first and foremost about the linkage of information to precision guided munitions for

targeting. In the case of peace missions, all participants are the informational equivalent

of targets. The impact of the availability of information allowing precise targeting of

precision guided munitions is as great as the nuclear revolution. As with nuclear weapons,

the mere ability of the US to use information to target precision guided munitions implies

that that the US has the capability to influence the action and assist allies without ever

becoming directly involved in the area.

As one carries the notion of information superiority to its logical end, the

information meta-system of the future illuminates the battlefield with bits of information.

These bits can be converted into firing solutions or just general assistance for our allies, we

provide aimpoints, they provide weapons. Remotely delivered bitstreams can produce

virtual allies and virtual coalitions. Virtual coalitions can illuminate regions and increase

countries' ability for self defense without provoking and arms race. Information can be

provided to allies to help protect borders without crossing. Illumination of demilitarized

zones allows immediate punishment of transgressor(s).

The information meta-system would consist of an amalgamation of all US and

international sensors, military and civilian, into one data stream available world-wide. It

would be stripped of sensitive information relating to sources and methods. This would provide the equivalent of "looking over each other's shoulders." If the international community accepts this system and is satisfied with the resulting security, this system may become a substitute for national security information systems. The binding of the worlds' security concerns together will not necessarily stop all wars, but it would prevent wars based on misunderstanding. It would certainly inhibit aggressive impulses of nations that value world opinion or require surprise for military success.[7]

This view provides one extreme of how the power of information could be used to keep the peace in the world. However, much like the nuclear peace of the Cold War, it relies on assured retribution to prevent conflict. Libicki ignores the idea of using information operations in a positive fashion to communicate directly to the peoples of the world bypassing autocratic government structures.

Current Status and Recommendations

So, what is the US doing to adopt information operations as method for reducing the cost of peace missions ? The US Congress and Executive are engaged in a continuing fight over entitlements, the national debt and foreign policy. Cuts in resources damage information instruments of foreign policy while MEDICARE and Social Security solvency is examined. Senate has cut Radio Free Europe/Radio Liberty so deeply that continued existence is in jeopardy. In Czech Republic and Poland domestic where democracy has begun to take root local news services have been established. In other parts of the old Soviet Empire, governments still control and restrict the public's access to news by controlling media content and distribution. Many of the nations that sprung from the Soviet Empire have not adopted Western standards of journalistic objectivity. Since the

Cold War, Radio Free Europe budget has dropped from $225 million to $75 million. Even though President Clinton and congressional leaders agree on the value for establishing a Radio Free Asia to encourage the growth of democratic institutions in China, the project continues to wait for funding. [8]

Information technologies provide potential new methods for conducting peace missions including preventive diplomacy. However, use against a sovereign nation or other geopolitical entity opens the door for reciprocal use. It also risks providing additional tools to potential belligerents. The issue of protection for peace operators and the potential for expanding the conflict through information operations provides an argument for foregoing information operations in peace missions. Event though information operations may provide important tools and techniques for the international community to influence the behavior of genocidal governments or fomenters of state supported violence use may cause unforeseen consequences. Even when effects can be localized, it is unclear that the benefits of manipulating a country's information network warrant the threat of exposing the nations committed to peace missions to information attack by legitimizing these operations. Control of information operations and protection against attack require clear rules and procedures endorsed by the international community of nations. [9]

In much the same way as the nuclear revolution in military affairs changed the face of war, the information revolution is changing the face of peace. Even though new and unconventional means of information operations raise ethical and political sensitivities, practical uncertainties and the danger of it being perceived as an act of aggression they still provide a cost effective method of keeping the peace. Planning should involve careful

consideration of consequences and actual execution should be under stringent political controls. The United Nations must develop countermeasures for protection of peace operators and consider international initiatives to limit or prohibit certain types of information operations not conducted under United Nations sanction.[10] Like any other component of national or international power, information operations must be harnessed to the political ends.

We are faced with a world in conflict and a compelling economic and humanitarian need to restore peace and establish stability. The issue becomes what price we are willing to pay if restoring peace to a region does not directly contribute to national interests. In the world of increasing conflict harnessing the power of information to foster peace and stability provides a cost effective tool. By using the power of the microprocessor and other emerging information technologies we can perhaps we can change Woerners assessment of "less threat but less peace" without breaking the bank.

Appendix A: The Costs and Value of Peace

The idea of armed and diplomatic coercion being used to make peace is indicative of the importance that most of the developed nations in the world community place on peace. This importance is founded on simple economics, while war may be profitable in the short term, the instability and drain on a nations treasury spells long term bankruptcy. For long term growth, nations need stable trading partners. The instability that war introduces leads to risk that inhibits trade as the trading partners wait for the outcome. A change of government weekly does not encourage long term investments in a nations economy. Although one may hear the laments at the UN about war being terrible because of the loss of life, in actuality there is a strong economic motive that drives most peace initiatives. The continuing expansion of the global economy causes nations to value peace as method to keep from "upsetting the applecart."

Protracted peace missions can also become resource intensive and lead to economic exhaustion of the nations providing peace operators. In particular peace enforcement and peace imposition can be very costly. Costs for the Somalia operation billed to the United States in 1994 were over $ 897 million.[1] This is the cost for an operation that lasted just under two years. At a 3% inflation rate this operation would have cost over a one billion dollars to sustain for 10 years. Two peacekeeping missions, United Nations Truce Supervision Organization and United Nations Military Observer Group in India and Pakistan, have been ongoing since the 1940's at a cost of $ 33.4 million per year.[2] While these numbers seem small in terms of overall gross national product, they are a constant resource drain on countries that may have other domestic and international priorities. Exhaustion of the national will to continue peace operations may

come from the desire to invest resources in enterprises with more positive outlooks. Long term peace operations with apparently intransigent parties consume supporting nations' will more quickly than they consume financial resources.

In a general sense, peace does provide an concrete economic return. An historical comparison of Gross National Products (GNP) (unadjusted for inflation) from two periods in history may be illustrative of the value of peace. During the period 1900 to 1950 there were two world wars and a large number of smaller conflicts. The Cold War had not yet begun to provide the fear-driven stability of the late twentieth century. A sampling of countries GNP growth reveals the profit of a stable world. During the period 1900 to 1940, the United States GNP grew at an average rate of 3.48 %. From 1950 to 1988 the United States GNP grew at a 7.13% rate. The standard deviation of the growth rate in the early 1900s was .12 as compared to .03 in the late 1900s. This difference implies larger swings in the growth rate around the mean.[3] France showed a change from 5.41% growth from 1900-1940 to 9.48% from 1950-1988. Again the standard deviations (.17 to .04) show a tighter grouping around the mean in the late 1900s. Brazil's performance shows phenomenal differences, 5.62% average growth from 1900-1940, 19.7% from 1950-1960 and 32.7% from 1960 on. The single anomaly in the samples is Russia. The lack of a market driven economy is a compelling factor in explaining the difference. Russian GNP data is sparse with many years missing and some perhaps exaggerated due to the penchant for the communist regime to declare the data classified. According to available figures, Russian GNP grew at an average rate of 21.37% from 1928 to 1940. From 1956 to 1988 the economy only grew at an average rate of 5.37%.

There are many possible explanations for this dramatic change, but the one that comes to mind is the demise of the monarchy and the change to communist rule.[4]

The foregoing examples indicate the value of peace, about 4% to 5 % points in the growth of gross national product in at least two cases.

Costs of Keeping the Peace

United Nations peacekeeping efforts from 1948 to March 1996 have involved over 750,000 military and civilian personnel at a cost of about $ 15.4 billion or roughly $330 million a year for 48 years. There have been 1,444 fatalities over the last forty-eight years.[5]

Figure 2 United Nations Peacekeeping Operations 1948-1995[6]

The interesting trend is the rapid increase in number and cost of UN peacekeeping missions in the 1990's. In 1995, the United Nations spent $2.6 billion on peacekeeping or about twenty per cent of the total UN expenditure from 1948 to 1994.[7]

The following charts illustrate the dramatic rise in the cost and number of United Nations

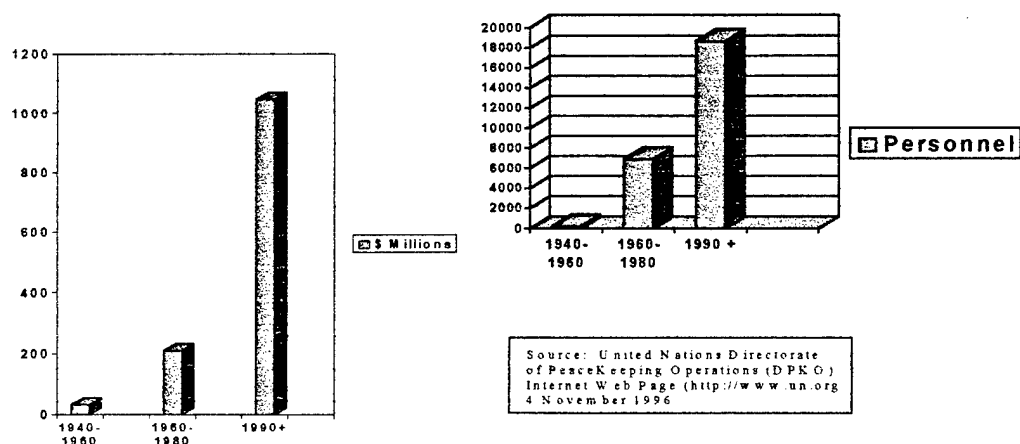sponsored peacekeeping efforts in the 1990's.

Figure 3 United Nations Peacekeeping Costs[8]

Of the $ 15.4 billion spent over the last forty-eight years, $1.48 billion or

approximately 10 %, has been spent 1990-1994 and the decade is just half-over. An

arithmetic extrapolation of this rate leads to an expenditure of about $2.5 billion for the

decade following the Cold War, more than was spent over the 40 year period from 1940

to 1980. This does not include the 1995 figure of $2.5 billion spent on the Bosnian peace

operation. Although these figures have not been adjusted for inflation, the rise in cost

far exceeds normal inflation. Note also the rapid growth in personnel involved from less

than 10,000 over the 40 year period 1940-1980 to over 18,000 since 1990, almost a 100%

increase. As a final note, from 1940 to 1980 the United Nations sponsored eighteen

peacekeeping missions, since 1990 there have been twenty-four United Nations

sanctioned peacekeeping operations, a 133% increase. There are many variables that

could explain an arithmetic increase spread over the the years, but the time coincidence

of the tremendous surge with the end of the Cold War point to it as the prime factor in

the increase in world violence necessitating more peacekeeping operations.[9]

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